UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,592	11/15/2001	Adam Peter Gawne-Cain	P51380US	7374

466	7590	12/20/2004

EXAMINER
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ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/987,592	GAWNE-CAIN, ADAM PETER
		Examiner	Art Unit	
		Hanh B Thai	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed June 30, 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5 and 10-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5, 10-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *8/2/04*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

This is in response to Amendment filed June 30, 2004.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed June 30, 2004 have been fully considered but they are not

persuasive.

Applicant argues on page 9 "there is no suggestion that "the system of ARUN et al. uses

a tree to model a single state of the database with each node in the tree corresponding to a

different data item". Examiner respectfully point out that this limitation is not reflected in the

claim language.

Applicant argues on page 11 "there is nothing in ARUN et al. to suggest use of such root

determination means." Examiner respectfully point out that the system of Arun allows the user

to modify and update the root version (Fi.3 and col. 6, line 63 to col.7, line23 of Arun).

Therefore, "the position of a root" must be determined and each node of the version tree (Fig.3)

corresponding to the data item.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

2.   Claims 1-3, 5, 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 1, step (e) recites "new record compiling means for compiling a supplementary

chunk of data providing a permanent record of the state of the database after the database-

state of the database before the database-modifying transaction which have been modified by the

transaction whilst not copying those data items from said record which have not been modified

by the transaction." The scope is difficult to determine because it is unclear which items have not

been modified. In the interest of compact prosecution, it is assumed that a permanent record is

made before changing the data and that all data is copied irrespective of being changed or not

changed.

Arun teaches a "parent state" reads on the before change condition and "child state" reads

on the after change condition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1-3, 5, 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arun

et al (US Patent no. 6,631,386) in view of Larson (US Patent no. 6,571,244).

Regarding claims 1, 17 and 18, Arun discloses a database management system for

maintaining chunks of data indicative of the states of a database comprising, both before and

after a transaction modifying the state of the database, the system comprising:

(a)   permanent records of the state of the database before the database-

modifying transaction and the state of the database after the database-modifying

transaction (see col. 4, lines 49-67, Fig.5, 6A-B and corresponding text, Arun);

modifying transaction and arranged to copy those data items from the permanent record of the

state of the database before the database-modifying transaction which have been modified by the

transaction whilst not copying those data items from said record which have not been modified

by the transaction." The scope is difficult to determine because it is unclear which items have not

been modified. In the interest of compact prosecution, it is assumed that a permanent record is

made before changing the data and that all data is copied irrespective of being changed or not

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after a transaction modifying the state of the database, the system comprising:

(a)   permanent records of the state of the database before the database-

modifying transaction and the state of the database after the database-modifying

transaction (see col. 4, lines 49-67, Fig.5, 6A-B and corresponding text, Arun);

(b)   relation determination means for relating at least one parent data item in the data chunk indicative of each database state to at least one dependent data item in the same data chunk (see Fig.3 and corresponding text, Arun). Fig.3 of Arun showing that relation of the data node of the database state to one or more leafnodes from the same root;

(c) root determination means for determining the position of a root data item in the data chunk indicative of each database state to which other data items in that data chunk are related (see Fi.3 and col. 6, line 63 to col.7, line23, Arun). The system of Arun allows the user to modify and update the root version. Therefore, "the position of a root" must be determined; and

(d) state determination means for determining the state of the database after the database-modifying transaction by relating the root data item corresponding to that database state to both at least one data item in the data chunk corresponding to that database state and at least one data item in the data chunk corresponding to the state of the database before the data-modifying transaction (see col.6, line 63 to col.8, line 3; Fig.5, 6A-B and corresponding text, Arun).

(e) new record compiling means for compiling a supplementary chunk of data providing a permanent record of the state of the database after the database-modifying transaction and arranged to copy those data items from the permanent record of the state of the database before the database-modifying transaction which have been modified by the transaction whilst not copying those data items from said record which have not been

modified by the transaction (Fig.6A and corresponding text, Arun. A "parent state" reads

on the before change condition and "child state" reads on the after change condition); and

(f) presentation means for presenting the database in the form of a relational

database structure (Fig.1 and Fig. 2 of Arun showing databases and tables in relational

database).

Arun, however, does not disclose a memory means for holding data chunks providing

permanent records. But, it well known to have a memory for storing data record as evident by

Larson (see Fig.1-2, Fig.7 and corresponding text, Larson). It would have been obvious to one of

ordinary skill in the art at the time of the invention to modify Arun to include the memory means

for containing data records as taught by Larson. The motivation of doing so would have been to

efficiently modify and manage data records.

Regarding claim 2, Aron/Larson combination further discloses the state determination

means is arranged to relate the root data item in the data chunk corresponding to the database

state of the database after the database-modifying transaction to at least one dependent data item

by way of at least one parent data item by use of the relation determination means associated

with that parent data item (see Fi.3 and col. 6, line 63 to col.7, line23, Arun).

Regarding claim 3, Aron/Larson combination further discloses that the state

determination means is arranged to record the position of the parent data item corresponding to

each dependent data item during the tracking of data items related (see Fi.3 and col. 6, line 63 to

col.7, line23, Arun).

Regarding claim 5, Aron/Larson combination further discloses the new record compiling

means is arranged to copy dependent data items from the previous record which have been

modified by the transaction, as well as parent items to which those dependent data items are related by the relation determination means (see col.7, lines 24-59, Aron).

Regarding claim 10, Aron/Larson combination further discloses that the previous state location means is provided to relate the data chunk indicative of the state of the database after the database-modifying transaction to the position of the data chunk indicative of the state of the database before the database-modifying transaction (see Fi.3 and col. 6, line 63 to col.7, line 23, Arun).

Regarding claim 11, Aron/Larson combination further discloses a version control system (VCS) defining branch points at which alternative versions of the logical state of the database are allowed to develop in parallel (see element 11, Fig. 1 and corresponding text, Arun).

Regarding claim 12, the combination system of Aron/Larson discloses in Fig. 1 a multi-user system permitting several users to modify the database simultaneously to produce alternative versions of the state of the database after modification, wherein the memory means is adapted to permanently hold a record of the state of the modified database produced by each user together with an indication of the user's logical view of the database before modification.

Regarding claim 13, Aron/Larson combination does not disclose the step of providing the user with an undo/redo mechanism. But, the combination system discloses the modification state of database. Therefore, it must have the undo/redo mechanism in the modified function of the system.

Regarding claim 14, Aron/Larson combination further discloses the analyzing means is provided to analyze database-modifying transactions made by the user (see col. 8, line 56 to col. 9, line 4, Arun).

Regarding claim 15, Aron/Larson combination further discloses identifying means is

provided to identify common mistakes made by user in making database-modifying transactions

(see col. 9, lines 36-54, Arun).

Regarding claim 16, Aron/Larson combination further discloses that each record contains

metadata providing information relating to the creation of the record (see col. 1, lines 7-32,

Arun).

Conclusion

4.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hanh B Thai whose telephone number is 571-272-4029. The

examiner can normally be reached on 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

<div style="text-align: right">

Hanh B Thai
Examiner
Art Unit 2161
</div>

December 9, 2004

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UYEN LE
PRIMARY EXAMINER
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